What is claimed is:

1. A repository of material property data comprising a plurality of materials property datasets, each dataset being associated with a sample of a material and a test on the sample of the material, each dataset comprising:

a) information on the material;

b) information on the sample;

c) information on the test; and

d) at least one result derived from the test on the sample of the material.

2. The repository of claim 1, in which the information on the material comprises at least one data element selected from a list comprising material name, material class, one or more material subclasses, material supplier, and material composition for composite materials.

3. The repository of claim 1, in which the information on the sample comprises at least one data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type.

4. The repository of claim 1, in which the information on the test comprises at least one data element selected from a list comprising a description of test method, test parameters, and test source information.

5. The repository of claim 1, in which the information is stored in the form of instances with associated metadata.

6. The repository of claim 5, in which the instances comprise at least one value, each value being associated with metadata giving information about the value.

7. The repository of claim 6, in which the metadata comprises at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value.

8. The repository of claim 1, in which the result comprises an instance of at least one data element selected from a list comprising a single data point, an equation, a graph, a data array, and a picture.

9. The repository of claim 1, in which the results are stored in the form of instances with associated metadata.

10. The repository of claim 9, in which the instances comprise at least one value, each value being associated with metadata giving information about the value.

11. The repository of claim 10, in which the metadata comprises at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value.

12. The repository of claim 11, in which results that share common defining parameters are grouped to display the effect of the defining parameters on the result.

13. The repository of claim 1, in which each of the datasets has an owner.

14. The repository of claim 13, in which each of the datasets further comprises information about the owner.

15. A method of managing material property data comprising the steps of:

a) storing material property data in a repository comprising a plurality of materials property datasets, each dataset:

i) being created by a data provider;

ii) having at least one owner;

iii) being associated with a sample of a material and a test on the sample of the material; and

iv) comprising:

a) information on the material;

b) information on the sample;

c) information on the test; and

d) at least one result derived from the test on the sample of the material;

b) providing at least one data owner with access to at least one dataset in the repository; and

c) providing at least one data user with access to at least one dataset in the repository.

16. The method of claim 15, in which the materials property datasets are created by the data provider by the steps of:

specifying generic information about the material including at least one of the class, subclass, terms that are commonly associated with the material, notes about the material, generic physical attributes such as shape and form, the component materials of the material and their relationship within the material;

performing preliminary validation checks as to whether the information for the material already exists;

perform preliminary validation checks regarding the structure of the data;

if the dataset passes the checks, entering the dataset into the repository.

17. The method of claim 16, in which the data provider specifies the dataset by submitting documents, each of which represent the results of the measurements.

18. The method of claim 17, in which the documents are submitted interactively using a form over a computer network.

19. The method of claim 17, in which the documents are submitted from a computer program.

20. The method of claim 19, in which the documents are submitted by the computer program using SOAP protocol.

21. The method of claim 15, in which the information on the material in at least one dataset further comprises a nomenclature of the material, and the dataset further comprises an identification of a material vendor, the method further comprising the step of providing the material vendor with access to the dataset for maintenance of the nomenclature.

22. The method of claim 21, in which the nomenclature is selected from a list comprising class, sub-class and general physical attributes.

23. The method of claim 15, in which the step of providing the data owner with access to at least one dataset in the repository comprises the steps of:

presenting the data owners with a list summarizing the data that they own, each item in the list possessing sufficient information for the owner to identify the property, the information being at least one of the name of the material, the name of the property, the date of measurement, identification of the specimen sample as obtained from the data provider and an identification of the test as obtained from the data provider; and

presenting the owner is with a hyperlink which would lead to the display of an overview and details of all results of the test.

24. The method of claim 23, further comprising the step of allowing the owner to narrow down the list to data which represent the same test or property data for the same sample.

25. The method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:

allowing the user to indicate any requirements on class, subclasses or suppliers of material;

allowing the user to indicate properties sought;

presenting a set of materials with their properties;

allowing the user to select at least one material and property from the set; and

displaying a summary and details of the set of datasets for the specified material and property.

26. The method of claim 15, in which at least some of the datasets in the repository further comprise data representing permitted user access privileges, and the step of providing a user with access to the repository comprises the step of comparing the user's access privileges to the data representing permitted user access privileges, and denying access to a dataset if the user's access privileges are not sufficient to access the dataset.

27. The method of claim 26, further comprising the steps, after the step of denying access, of:

presenting the user with a form to request access to the dataset;

accepting the form from the user;

notifying the data owner of the request for access, along with basic identification and contact information about the requesting user;

allowing the data owner to accept or reject the request;

if the data owner accepts the request, updating the data access privileges in the dataset to permit access by the user.

28. The method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:

allowing the user to indicate any requirements on class, subclasses or suppliers of material;

allowing the user to indicate restrictions on values of results;

presenting a set of materials with their properties which conform to the restrictions;

allowing the user to select at least one material and property from the set; and

displaying a summary and details of the set of datasets for the specified material and property.

29. The method of claim 15, in which the step of providing the data user with access comprises the step of providing data in a format which is understandable by a selected computer program or application.

30. The method of claim 29, in which the repository further stores information describing the format which is understandable by a selected computer program or application.

31. The method of claim 15, in which there are a plurality of data users and a plurality of domains, and at least one domain administrator associated with at least one domain, and the method further comprises the steps of:

the domain administrator assigning at least some of the plurality of users to at least one domain,

the domain administrator setting policies for access of at least one dataset by the users assigned to the domain.

32. The method of claim 31, in which the domains are a company or a division of the company.

33. The method of claim 31, further comprising the step of permitting the domain administrator to assign at least one domain to at least one other domain.

34. The method of claim 15, in which the information on the material comprises at least one data element selected from a list comprising material name, material class, one

or more material subclasses, material supplier, and material composition for composite materials.

35. The method of claim 15, in which a data life cycle of at least one dataset is controlled by the step of permitting at least one user to activate, inactivate, deprecate and discard the dataset.

36. The method of claim 35, further comprising the step of providing any user with a review of any active dataset upon request.

37. The method of claim 15, in which the information on the sample comprises at least one data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type.

38. The method of claim 15, in which the information on the test comprises at least one data element selected from a list comprising a description of test method, a standards body specifying the test, test parameters, and test source information.

39. The method of claim 15, in which the information is stored in the form of instances with associated metadata.

40. The method of claim 39, in which the instances comprise at least one value, each value being associated with metadata giving information about the value.

41. The method of claim 40, in which the metadata comprises at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value.

42. The method of claim 15, in which the result comprises at least one data element selected from a list comprising a single data point, an equation, a graph, and a picture.

43. The method of claim 15, in which the results are stored in the form of instances with associated metadata.

44. The method of claim 43, in which the instances comprise at least one value, each value being associated with metadata giving information about the value.

45. The method of claim 44, in which the metadata comprises at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value.

46. The method of claim 15, in which each of the datasets further comprises information about the owner.

47. The method of claim 15, further comprising the step of providing at least one data owner with means to monitor usage of at least one dataset.